ENGINEERING CHANGE NOTICE

ECN #: DART AEROSPACE LTD 702 Date: 05.06.10 Created By: Checked By: Project No: DZ12-664 Approved By: Approved By: Project Name: (Management if reqd) CROSSTUBE INSTALLATION (Proj. Manager) Description of Change: RELEASE: TO STO SHOILY ISSUE 3 D3428 RN. A D212-664-141 REV. B ICA-DZ12-664- Rev. Z D212-664-241 REV.B 11N-D212-664 ROV. C D412-664-243 REV. B FM3-D214-664 Rev. A Authorization Notification/Acceptance Affected Initials QΑ Production 1601-581 Planning Marketing NIA Yes No Responsible Complete **Engineering Actions** To happen by: 05.06.13 PST RU Update Blue/Pink File V KS/PH 05.06.14 Update DSI File V 05.06.10 A Update D-Part Master Binder KI 05,06.14 05.06.134505.06 Update Grey Project Binder 05,06.14 KI Update DEO Binder Update Master Document List PH/05 05,06.14 05.06.13 PM Update Drawing Approval Record 05.06.13 W KS/PH 105.06.13 AH 05.06,14 Update Change Record Form 05,06,14 Move Electronic File KJ ASAP. 05.06.08 Notify TCA of Change DS Notify FAA of Change 05,06.13 9 Update QSI 021 KS 05,06.14 Update QSI 036 05:06-13 14. KI 05.06.14 Scan Documents 05,06.13 18. Update MIS Database 05.06.14 KJ 05.06.13 KL Update Access Database 05,0614 ŁI 05.06.13 K) DA 05.106,14 KI/PH Verification ARC 05.06.13 44 Create/Update STC Approval List 05.06.14 45 65.04.22+A Create/Update IPP's JLM 05.06.14 45 05,06,4 Create/Update BOM's 05.06.14 05.6Q.00 W Create/Update PPP's **V** KI KYVDH 05.06, 26 \$ Update Paperwork Kits in Production 05.06.14 05,06.24 Update Paperwork Kits in Stock KO DH 05,06,14 Rework/Scrap Current Production PH/U see attacked 05,06,28 05.06.28 PH/UL Rework/Scrap Kits in Stock? KS Create/Update Laminated Dwgs 05,06,14 05,06.14 4 Create/Update Controlled Dwgs 05.06.14 05.06.13 Create/Update FAI sheets **V** Create/Update CNC Programs Create/Update Tooling JLM 05. OB, 68 Create/Update DXF File V MPP required? **Notify Previous Customers** Notify Eurocopter France Notes: SEE ATTACHED, NOTES.

ECN Complete:

Date: 05-09.09.

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		ACTIVITY SUMMARY REF	-UKI			
		Attendees:		Report	Гуре:	
		NOTES PROPANED BY		Cubi		
		DAMO SHEPHEND.		Subject	ECN 702	2
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	ART AEROSPACE LTD			Date:	05.06.13	
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Item		Description	Respo	onsible	Due Date	Action / Date
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	D412-664-203 ->		ļ	1		
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4	UPDATE 1PP + BOM	FOR D212-664-101-201	TIN	1/KI	ASAP.	.
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5	MAKE SOME D3428	4 IN DROBBERT	1 L	ا ا	ASAP.	
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Kim Johnston

From:

"David Shepherd" <davids@dartaero.com>

To:

"Bill Beckett" < billb@dartaero.com>

Cc:

"Kim Johnston" <kimj@dartaero.com>; "Jean-Luc Menard" <jeanlucm@dartaero.com>; "Linda

Lacelle" lindal@dartaero.com>; "Peggy Mcdonald" <peggym@dartaero.com>; "Peter Hum"

<peterh@dartaero.com>

Sent:

Tuesday, June 21, 2005 12:03 AM

Subject:

Dart crosstubes compatible with Bell skidtubes

Bill,

Further to our discussion last night, I just wanted to make sure that if we are not going to start drilling the extra 4 holes in the medium Bell crosstubes right away, we still need to update the IPP and BOM right away to add the extra bolts to the kits. The contents of the DSI (instructions for drilling the extra holes) are in the new IIN, but without the extra bolts, the customer is still screwed if he is installing his crosstubes with Bell skidtubes. If the extra holes are not going in, the CHG number cannot change. The CHG number is important because it is used to distinguish crosstubes without extra holes from crosstubes with extra holes in the Installation Instructions.

I do not want that DSI being used anymore. It was a temporary measure for some UH-1 customers who couldn't wait. I didn't approve it as a delegate (no stamp) and it is therefore not suitable for the civilian market.

It is essential that this transition is co-ordinated with Kim. It was my understanding that we were going to do this change right away and retrofit the stock right away. PPP's may have already been changed and the new change number may be on the IPP.

The 212 fwd and aft crosstubes in progress should get the new IPP with the extra hardware as well as the latest paperwork even if the extra holes aren't being added.

The 2 x 412 aft crosstubes in stock should at least get the latest paperwork and the extra hardware even if they are not getting the extra holes. Don't change the CHG number if the extra holes aren't being added.

With respect to the extra holes in the existing drill jigs (I assume this is how you are going to do it although there are some complications because the extra bushings will be flush against the table ... may have to move crosstube off table, insert bushings, pin jig using existing forward-aft holes, and then drill extra holes), I am not sure if we have any of those special drill jig bushings and liners in stock (I believe we need 8 x 0.386, but someone should double check). We may have to order them and I believe they have been a special order in the past. If we are ordering them, we should look at ordering the bushings we need for 206 at the same time (I believe we need 32 x 0.323, but someone should double check).

I also recommend that we use scrap ends off Dart crosstubes in Engineering lab to do a fit test (drill scrap cuff and do test fit with Bell saddles) before we start drilling money holes in NEW crosstubes.

Hope this helps.

David

Finished Inventory Log

Part Number: <u>D212 - 664-101</u>

Description: Crossfule Installation

Batch	Comments	Finish	P/S	Customer	Date	ln	Date
		Date		Code	Shipped	Stock	Verified
B13469		02-03-00	13004214	MUST	04518	18	
B15470	\checkmark	02-03-08	3004226	CHLV	04527	, ,	
B15473		02.03.08	300425	1 CAGL	04.06-2		
B15475		102-03-08	9001418	HOUR	040G-4		
B15476		02-05 08	700141	FAAS	OHOG-4		
B13691		102-03-20	9001417	FAAS.	04/01-4		
13/2834		02.03.21	900/2/12	HELT	(H/Y)-29L		
13/3853		(37-03-51	1300-199	1 EHGA	04-11-19	<u> </u>	
13 13836		02.03.20	300 449	PHOL	04-01-01		
B 18837		102.03.07	300,679	HUIS	09-11-11		
\$ 13838		02.05-07	13007347	EAGL	09-11-33		
2/2/3/		02-03-01	130073/a3	RAGU	04-1203		
13/3840		0203.0	2001392	STOA	CYF17-09		
12 22 27	· · · · · · · · · · · · · · · · · · ·	00.05.0	3000 10A	5004	05-01-10		
1201g		02023	1101	MAIL	20140	-	
18/8/24		191703	3/1/40/20	MOMPOL	5 02 24		
18/86 33		13-07-03	218-41928	CHIECOI	05-03-24	18	NH-HID
1322112		05-03-31	2/24919	C 10xx08	0508/01	199	14-06-30
1322173		05-02-31	30774979	PLOCKOL	050401	49	NLIIN
13225641		125-03-31	3004929	CLOCKOL	05-04-01	147	0412-00
1322426		05-63-31	3004929	CLOCKOI	05-04-01	3	05-01-04
322622		05-04-14	30741993	CBJILOI	0504-15	2	05-02-2
B22673		05.04-14	3004968	CIAMA OI	05-04-15		
B22670		05.04-14	3004948	CTAMBOI	0504-15		
1322671		05.04.14	3004987	CWITHOL (55-04-15		
B22672		05.04.14	3004987	CWITHOL	05-0415		
022021	· · · · · · · · · · · · · · · · · · ·	05.14.14	3005082	CBILLOI	05-04-15		
1522776		05-05-4	3005194	CRESDOI	05-05-4		
1322429		05-05-19	300585	CEREAU	05.05.10		
13/2/15		05-05-19	3003243	CTAMAOI	05-05-25		
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Finished Inventory Log

Description: Crosstule Installation

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B18149 V B18150 V B18152 B18153 B18154 B18155			3004214 3004220 300423	4 .c	04-05-18		
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15/8/0/04)		03-01-2	300 4 <i>471</i>	EHGL	04-11-03		
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B18664		03-04-01	300451	1 HU1 3	0111-11		
BJ 8665 L		03.04.0/	300452	C1961	64/1/23		
B/8666		03.04.17	300 406	PHOL.	U4-12-U.D		
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B18670		05-04-17	3004833	CUTITION	U) Uddy		
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B 18680		100-107 100 15 00	300 4987	CWITHO!	05-04-15	 	
12/860/		03.03-07	9/4/12/13	1155	14/2/6		
B18671		13 14-24	3/10/4010	CLOXIX 61	05-041-01		
B18682		10 16:11	3004987	CWITHOL	05-14-15	24	141-11-12
B 22833		05-06-00	3075194	CRESOOI	1)5054	25	124-1010-36
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Part Number: <u>0412</u> -664 -203

Description: Crosstube Assembly High Aft

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	Batch	Comments	Finish	P/S	Customer	Date	l In	Date
			Date		Code	Shipped	Stock	Verified
	B17889		02/07/18	F201-430	02/07/18	·	-	,
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	B18115		0306.13	9001195	EDW A	04-01-12	2	68-07-01
	B19201		03-10-01	Sco	pped	۷	2	03 08 06
	18/14		73-03-2	¥ 400/4/8	MOUE	0406-4	2	04-02-05
	B 19202		04.06.03	4001417	FAAS	0406-4.		04-412
	B 19203		04 06-09	9001417	FAAS	0400		
	6,19,205		04063		•		3	04-06-30
	B19201		04-06-3	1 / 6	Ind. 2		3	0411-01
	D19204		04.06.25	MAI	17506		<u> 3</u>	01-12-62
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DART AEROSPACE LTD	Work Order:	23644
Description:	Part Number;	1264-203
Dwg:	Otv.	
	23.	Page 1 of 1

Stan	Location	Proceedures			,
Step	DC	Procedure	Ву	Date	Qty
	,		a	08,06 m	-1
1.5	Stores	add to kit: prosen 702 : B192	1/2		
		new paper work			
		2x AN6-41A M17231			
		CX H106-1171	 		
	ļ	10 + AN960JD616 m17231			
		2 x M521047 L6 m15194	CL	05/06/22	1
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3	60	Inspect kit 100% for completeness	1	-(-1, 70	1
	<u>UU</u>	Signet kit 100 to for completeness	4:	05-06-22	/
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6	WC	Inspect level 21	-121	65.06.28	1
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Rev	Date	Change		 Revised By	Approved
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		New issue	1		

ENGINEERING CHANGE NOTICE

DART AEROSPACE LTD						EPN #: 70%	2
Date: 05.06-10						100	_
Project No: DZ1Z-664			Created I		Checked By:		-
Project Name:	Approved By: Approved By:						
CROSSTUBE INSTALL	ATTO	(Proj. Manager) (Management if reqd)					
Description of Change:							
RELEASE ! TO STO SI	+01-	9 3	essue 3	5 / -	D3428 Rev. A		
ICA-DZIZ-					D212-664-14	1 Rev. B	
11N-D212	-				D212-664-24		·
_		-			D412-664-24		l
FM3-D214							
Notification/Acceptance	Affe	cted	Initials		Authoriza	ation '	
QA	<u> </u>	,	ļ		•		
Production		<u>,</u>		0/0	1-581		
Planning	¥	1		100	1, 201		
Marketing		la_		<u> </u>			
Engineering Actions	Yes	No		onsible	To happen by:	Complete	
Update Blue/Pink File	<u>/</u>	L		KT/PH	05,06.14	<u> </u>	
Update DSI File	_	V			ļ,	ļ	
Update D-Part Master Binder	 	<u> </u>		KJ	05,06.14	05.06,00	}
Update Grey Project Binder	\checkmark	ļ,		KIL	05.06.14		
Update DEO Binder		$ \checkmark\rangle$	ļ				
Update Master Document List		$ert \checkmark$	ļ		<u> </u>		
Update Drawing Approval Record	V.			PH/DS	05,06,14	05.06.13	
Update Change Record Form	V	ļ		KS/PH	05.06.14	\$ 05.06.13.	
Move Electronic File	<u>V</u> ,			KJ .	05,06,14	05.06.08	٧.
Notify TCA of Change	\perp	<u> </u>		DS	ASAP.	05.06.08	-
Notify FAA of Change	<u> </u>						
Update QSI 021	<u> </u>			KS	05,06.14		
Update QSI 036		$ \angle $					
Scan Documents		<u> </u>		KJ	05.06.14	<u> </u>	
Update MIS Database	\vee			KS	05.06.14	05.06.134	
Update Access Database				43	05.0614	105.06.13 Kg	,
Verification ARC				KI/PH	05.06,14	05.06.13	
Create/Update STC Approval List				KJ	05.06.14	05.06.13	
Create/Update IPP's	V		•	ILM	05.06.14		
Create/Update BOM's	V			KT	05.06.14	.]	
Create/Update PPP's	V.			K0	05.06.14	15.06.13 N	<u></u>
Update Paperwork Kits in Production			-	KS/DH	05.06.14		
Update Paperwork Kits in Stock	V			KJ/DH	05,06,14		
Rework/Scrap Current Production	$\sqrt{}$			4/4		4 05:08:12	new pri
Rework/Scrap Kits in Stock?	$\sqrt{}$		f	H/u		1700	
Create/Update Laminated Dwgs				RJ	05,06,14		
Create/Update Controlled Dwgs				45	05.06.14	05.06.13 4]
Create/Update FAI sheets		V .					,
Create/Update CNC Programs		V					
Create/Update Tooling	V			JLM			
Create/Update DXF File		V,					
MPP required?		V					
Notify Previous Customers		V			7		
Notify Eurocopter France		V				•	
Notes: SEE ATTACHED NOTES	-		_				
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LIAS	-01			EON O	lata.	Deter	
H:\Forms\Engineering\approved eng\l	=CNr6	iX.LV€	S	⊏UN Comp	lete:	Date:	

DART AEROSPACE LTD

Work Order: 2345

Description: Custom W/O to update paperwork & Part Number: D212-664-201

Add hardware D412-664-203

Dwg: N/A

Ref: N/A

Page 1 of 1

Step	Location	Procedure	Ву	Date
1	DC	Issue Traveler	H	\$106.22
2	ST	Remove from finished inventory Qty Part Number Description Batch 1 D212-664-201 HIGH AFT XTUBE Z2831 1 D412-664-203 HIGH AFT XTUBE 19205	NA	W
3	КР	Add new hardware and paperwork to D212-664-201 Pick: Qty Part Number Description 2 AN6-41A Bolt M17231 10 AN960JD616 Washer M17231 2 MS2142L6 Nut (or -6) M15/94 1 D3428-1 Placard DZ3667 1 new paperwork	cz	55106124
4	KP	Add new hardware and paperwork to D412-664-203 Pick: Oty Part Number Description Batch 2 AN6-41A Bolt 10 AN960JD616 Washer 2 MS2142L6 Nut (or -6) 1 new paperwork	N	An
5	QC5	Inspect work to Step &	ll c	5-07-04
6	PK	Ensure paperwork and P/N's match with boxes.	Λ	05/07/04
7	ST	Return to finished inventory	^	05/07/04
8	AC	Cost / part: 18.9 y		05-27-06
9	DC	Close W/O Inspect Level 21	<i>h</i>	06.07.15
10	(Note:	Attach a copy of Custom W/O to each of the W/O's listed in Step 2	above)	

Rev	Date	Change	Revised By	Approved
Α	05.06.22	New Issue	 KJ/JLM C	4//